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Takatori et al.

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(54) **ADAPTIVE TRANSMITTER FOR DIGITAL TRANSMISSION**

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(*) Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(52) U.S. Cl. **375/296; 370/201; 324/628; 455/522**

(58) Field of Search **375/219, 296, 375/285, 257, 287, 288; 370/201, 282, 286; 379/399, 406, 410, 411; 455/500, 501, 127, 67.4, 522, 571, 14, 69, 115, 126; 324/628**

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(57) **ABSTRACT**

A method for controlling the power and/or frequency output of a digital data network's transmitters is described. The method controls the transmitter power and/or frequency output by using line loss information as well as the noise margin at both the central office and remote site sides of the transmission link. The transmitters are controlled to minimize the crosstalk between the interconnections on the network. Measurements are taken of the cable losses and signal-to-noise ratios present on the system and the transmitter power and/or frequency are adjusted to minimize unwanted interactions between transceiver pairs on the network.

13 Claims, 4 Drawing Sheets

